

# KNOWLEDGE & INFORMATION FAST TRACK

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## MORE RESEARCH NEEDED

JULY 2021



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# What it's all about...



The Cochrane Library and other sources regularly publish new reviews, some of which highlight the lack of good quality studies on which to base recommendations. This is a good starting point for identifying a new area of research.

**NOT SURE  
WHERE TO  
START?**

This bulletin highlights recently published work that requires further research to be undertaken - get your inspiration here...

**WANTING  
TO DO  
SOME  
RESEARCH  
?**

The second step is to find out what else has been published. If you would like a literature search on any of these topics please contact the Library Service on ext 53831.

# Recently published

But more research is needed...



## **Bisphosphonate use in children with cerebral palsy**

Authors' conclusions: Based on the available evidence, there is very low certainty evidence that bisphosphonate treatment may improve bone health in children with cerebral palsy. We could only include one study with 14 participants in the assessment of the effect size; therefore, the precision of the effect estimate is low. We could only evaluate one planned primary outcome, as there was insufficient detail reported in the relevant studies. Further research from RCTs on the effect and safety of bisphosphonate to improve bone health in children with cerebral palsy is required. These studies should clarify the optimal standard treatment regarding weight-bearing exercises, vitamin D and calcium supplementation, and should include fracture frequency as a primary outcome.

## **Interventions for preventing diarrhoea-associated haemolytic uraemic syndrome**

Authors' conclusions: The included studies assessed antibiotics, bovine milk, and Shiga toxin inhibitor (Synsorb Pk) and monoclonal antibodies (Urtoxazumab) against Shiga toxin for secondary prevention of HUS in patients with diarrhoea due to STEC. However, no firm conclusions about the efficacy of these interventions can be drawn given the small number of included studies and the small sample sizes of those included studies. Additional studies, including larger multicentre studies, are needed to assess the efficacy of interventions to prevent development of HUS in patients with diarrhoea due to STEC infection.

## **Non-pharmacological interventions for spatial neglect or inattention following stroke and other non-progressive brain injury**

Authors' conclusions: The effectiveness of non-pharmacological interventions for spatial neglect in improving functional ability in ADL and increasing independence remains unproven. Many strategies have been proposed to aid rehabilitation of spatial neglect, but none has yet been sufficiently researched through high-quality fully powered randomised trials to establish potential or adverse effects. As a consequence, no rehabilitation approach can be supported or refuted based on current evidence from RCTs. As recommended by a number of national clinical guidelines, clinicians should continue to provide rehabilitation for neglect that enables people to meet their rehabilitation goals. Clinicians and stroke survivors should have the opportunity, and are strongly encouraged, to participate in research. Future studies need to have appropriate high-quality methodological design, delivery, and reporting to enable appraisal and interpretation of results. Future studies also must evaluate outcomes of importance to patients, such as persisting functional ability in ADL. One way to improve the quality of research is to involve people with experience with the condition in designing and running trials.

**From other sources...**

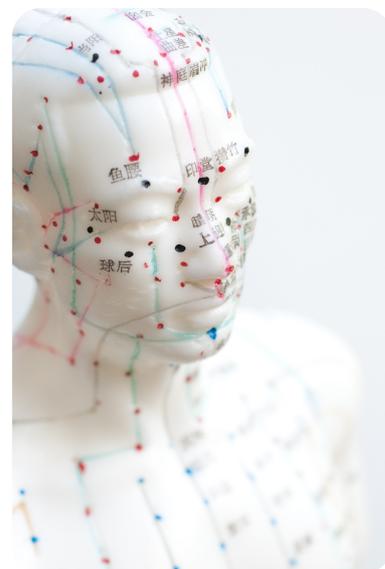


### **Effectiveness of Acupuncture for Post stroke Aphasia: A Systematic Review and Meta-Analysis of Randomized Controlled Trials**

Results: Fourteen trials involving 936 participants had poor reporting and methodological quality. Our meta-analysis showed that compared to the speech and language therapy (SLT) group, acupuncture combined with SLT could improve the rate of Boston Diagnostic Aphasia Examination (BDAE) (OR: 0.15, 95% confidence interval [CI]: 0.04-0.25,  $p = 0.005$ ), scores of Aphasia Battery of Chinese (ABC)

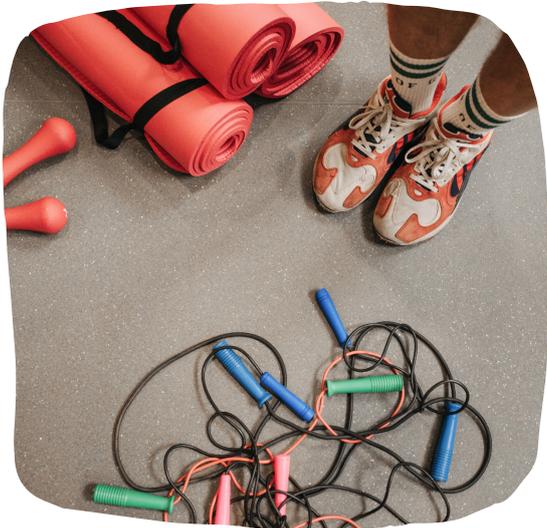
scores of Aphasia Battery of Chinese (ABC) which includes repeating ability (SMD: 1.46, 95% CI: 1.24-1.69,  $p < 0.00001$ ), reading ability (SMD: 1.57, 95% CI: 1.25-1.90,  $p < 0.00001$ ), writing ability (SMD: 1.52, 95% CI: 1.19-1.86,  $p < 0.00001$ ), naming ability (SMD: 1.40, 95% CI: 1.04-1.76,  $p < 0.00001$ ), and listening comprehension ability (SMD: 0.57, 95% CI: 0.22-0.92,  $p = 0.001$ ). All RCTs were considered at high risk of biased assessment.

Conclusions: Acupuncture (either alone or combined with SLT) may be effective for poststroke aphasia. In the future, rigorous clinical trials with an accurate method design and high reporting quality are required to validate our results.



### **Preoperative high intensity interval training for oncological resections: A systematic review and meta-analysis**

Abstract: Exercise prehabilitation prior to major surgery targets a reduction in postoperative complications through improved conditioning and respiratory function. However its effectiveness in cancer surgery is unclear. The objective of this review was to determine if preoperative high-intensity interval training (HIIT) improves preoperative fitness in patients scheduled for oncologic resection, and whether postoperative complications are impacted. METHODS: CINAHL, AMED, PEDro, EMBASE, The Cochrane Library and PubMed/MEDLINE were searched until April 2021 using predefined search strategy and accompanied by manual forward and backwards citation review. Screening of titles, abstracts, full-texts, data extraction, risk of bias assessment and methodologic quality was performed independently by two reviewers. Mean difference (MD) with 95% confidence intervals (CI) was compared and heterogeneity assessed using Chi Squared Test and I<sup>2</sup> statistic. Six randomised controlled trials (RCTs) were included in



the systematic review. Interventions prescribed bouts of high-intensity exercise [80-115% peak work rate (WRp)] interspaced with low-intensity (rest-50% WRp) exercise. The meta-analysis included five RCTs reporting peak oxygen consumption ( $VO_{2peak}$ ). Preoperative HIIT did not result in significantly higher  $VO_{2peak}$  in comparison to usual care or moderate intensity exercise (MD 0.83, 95%CI-0.51-2.17)  $kg/ml/min$ ,  $p = 0.12$ ). Studies were insufficiently powered with respect to postoperative complications, but there is no evidence of significant impact. No adverse events occurred and high adherence rates were reported. Results of this systematic review and meta-analysis demonstrate there is insufficient evidence to support HIIT as a method of improving preoperative fitness prior to oncologic resection. Further work is needed to determine if specific HIIT parameters can be adapted to improve efficacy over short time-frames.

### **The effects of orally administered lactoferrin in the prevention and management of viral infections: A systematic review**

Abstract: It has been demonstrated that lactoferrin (LF) plays a role in host defence, but evidence on its potential antiviral property from clinical studies is fragmented. Our systematic review aimed at identifying the effects of orally administered LF against virus infections. The systematic search was conducted on PubMed, Scopus, Web of Science, BioRxiv.org and ClinicalTrials.gov from database inception to 7th January 2021. Eligible articles investigated any virus

any virus family and provided data on the effects of orally administered LF of any origin in the prevention and/or management of confirmed viral infections in people of any age. A narrative synthesis of the results was performed. Quality was assessed with the Cochrane Risk-Of-Bias and ROBINS-1 tools. A total of 27 records were included, nine of which were registered protocols. We found data on Flaviviridae (n = 10), Retroviridae (n = 3), Coronaviridae (n = 2), Reoviridae (n = 2) and Caliciviridae (n = 1). Most published trials were at high risk of bias. The findings were heterogeneous across and within viral families regarding virological, immunological and biological response, with no clear conclusion. Some weak but positive results were reported about decrease of symptom severity and duration, or reduction in viral loads. Despite high tolerability, the effects of LF as oral supplement are still inconsistent, both in preventing and managing viral infections. Small sample sizes, variety in recruitment and treatment protocols, and low study quality may have contributed to such heterogeneity. Better-designed studies are needed to further investigate its potential benefits against viral infections, including SARS-CoV-2.



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# **GET IN TOUCH**

**If you would like to get involved with research or have an idea for a project contact the R&D Department who can offer advice and support on getting started.**

**The Clinical Research Centre is located on the Second Floor within Area 5 of Blackpool Victoria Hospital.**

**For general enquiries, please call us on: 01253 65 5547  
Or email: [bfwh.researchideas@nhs.net](mailto:bfwh.researchideas@nhs.net)**

**For more information about this newsletter please contact Laura Sims, Electronic Services and Outreach Librarian on 01253 956688 / [laura.sims2@nhs.net](mailto:laura.sims2@nhs.net)**

